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FATS AND OILS MANUAL

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## FATS AND OILS REPORTING MANUAL

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Fats and oils are perhaps the most complex group of agricultural commodities, as well as the most universally produced. The distinction between fats and oils is largely artificial - particularly for vegetable products - since the physical state is merely a question of the melting point, which means that a fat can be an oil, or vice versa, at different times of the year or in different parts of the world. Too, the melting temperature of all oils can be artificially raised within limits to almost any desired point by means of hydrogenation. Most vegetable oils are liquid at normal temperatures. Fats and oils are normally classified as edible and industrial. However, very few of the world's important oils are exclusively either one or the other by virtue of their natural composition; on the other hand, certain man-made processes often render a naturally edible oil inedible, or vice versa. Thus, the use to which a particular oil is put is, as a rule, determined by custom and/or by economic factors.

### Used for Human Consumption

Oils are used for human consumption either in their original form - as obtained by crushing the raw material and often refining it to some extent - or in the form of hydrogenated fats, which are frequently used in margarine or shortenings. In general, the degree of refining and processing to which food oils are subjected is an indication of the degree of economic development of any given nation or region. The most important edible vegetable oils in world trade are peanut, cottonseed, soybean, coconut, palm and olive oils. Sesame, rape, and sunflower oil are also very important in the nutrition of a large part of the world's population, although they do not normally enter into international trade to any significant extent.

### Industrial Uses

The industrial uses of fats and oils are numerous and ever-growing and changing. It is this complexity in industrial uses which largely makes for the difficulty of understanding and following the world fats and oils market. The original and, of course, traditional industrial use for fats and oils - principally of animal origin - is in soap making, still the most important non-food utilization of these commodities. Even though in a number of countries - notably in the United States - synthetic detergents made from petro-chemicals are rapidly displacing traditional soap products, consumption of soap is steadily rising in others. In the U. S., coconut oil is the principal vegetable raw material for soap making.

The next most important industrial use of oils is in the manufacture of paints and varnishes, linoleum and oilcloth, and recently in resins,





and thus, indirectly in plastics. The oils used in these processes are known as drying oils due to the property of oxidizing into tough yet elastic films. The most important drying oil is linseed oil. Soybean oil, suitably treated, is also used extensively. Tung oil is employed in large quantities in these industries and a number of other oils are used in smaller proportions and for limited purposes. Some vegetable oils - e.g., rapeseed oil and castor oil derivatives - are used for specialized lubrication jobs, alone or mixed with mineral oil. Castor oil also has other important uses; besides its well-known medicinal properties, it is widely used in textiles and as a plasticiser. It also can be modified into a drying oil.

### Marine Oils

Marine oils are generally classified into whale, sperm and fish oils. Only among the Eskimos are fish oils used for food in their natural state, but in Northern Europe deodorized and hydrogenated whale and fish oils are used in margarine manufacture. Sperm oil has a number of industrial uses.

### World Production

World production of all fats and oils is much larger today than it was during the immediate pre-World War II period, with most of the increase in the edible oils, particularly cottonseed, soybean and peanut. At the same time, world exports also increased greatly, particularly in lard, tallow and greases and in cottonseed oil.

### Position of the United States

The over-all position of the United States in the fats and oils trade has changed radically, from a prewar net annual import position of about 2 billion pounds to even larger net exports. The bulk of the phenomenal rise in U.S. exports has been in lard and tallow and in soybeans which, together with cottonseed and linseed oil, make up the bulk of U.S. fat and oil exports. The largest import items of the United States are, approximately in order of magnitude, copra and coconut oil, castor beans and oil, palm oil, olive oil and tung oil.

U. S. production of food fats has been increasing much more than consumption in recent years. As a result, the maintenance of expanded export markets has become of greater importance to American growers of oil-bearing products.

While peanuts are not primarily grown for oil in the U.S., they are the only oilseed included among the basic commodities entitled to a mandatory price support level; their imports are also sharply limited by a "Section 22" quota; the peanut oil quota is quite liberal. Price support on tung nuts is also mandatory, but the support level may be administratively determined between 60 and 90 percent. Support prices



for other oilseeds are permissive and have been in effect for some years on soybeans, cottonseed and flaxseed.

### Sensitivity of World Market

The world's fats and oils markets are quite sensitive to demand and supply shifts, as well as to extra-economic influences. A large part of the buying is done by or on behalf of large-scale processors. A fraction of a cent's difference per pound in the price of a large inventory of oil can make all the difference between profit and loss to a soap or shortening manufacturer in a highly competitive market.

The relatively high concentration of buying power, together with the virtual absence of central marketing organizations in the fats and oils trade at times cause considerable fluctuations in the demand, supply and price situation. A period of several years of relative calm and declining prices is sometimes followed by a sudden frantic scramble for available world supplies during times of actual or threatening emergencies, which may call for international allocations of these commodities, many of which come under the heading of strategic materials.

### Contacts with Trade

A more detailed discussion of the occurrence, processing, characteristics and markets of specific fats and oils is purposely omitted, since it is felt that it would be more valuable for you to familiarize yourself with these matters on the spot, with specific reference to products of local importance. For this purpose, the value of personal acquaintance with members of the fats and oils trade, in the importing, exporting, marketing and processing fields, cannot be over-emphasized. As was brought out earlier, the field is extremely specialized and complex; thus, maximum contact with the trade itself is a prerequisite for intelligent reporting. Contacts should be sought above all with representatives of American traders and processors, as well as with other concerns of international scope.

### Suggestions on Reporting

In reporting on the fats and oils situation in your country, you should attempt to give priority to the most important products, particularly to those which move in international trade. Particular attention should be given those fats and oils and oil-bearing materials which are (a) actually or potentially competitive with U.S. exports (e.g. cottonseed oil, soybeans) and (b) essential U.S. imports (e.g. castor beans and oil, tung and palm oils). It is suggested that only a minimum amount of time and effort be put into both statistical and analytical reporting on secondary oils obtained as by-products (such as grapeseed or corn oil) and on miscellaneous specialty oils, which are not important either locally or





in international trade, provided their coverage is not specifically requested by FAS. If data or rough estimates on such oils are readily available they should, of course, be included in overall balance sheets, but they can be grouped statistically into one class.

Price reporting should cover current domestic, import and export prices. Wherever possible, work up comparisons of local market prices with the landed prices of similar imported commodities (a) from the U.S. and (b) from competing exporters, and show reasons for unusual spreads. Be sure to show the applicable dollar conversion rate in each case when quoting prices in local currency (which, incidentally is always preferable and will save you time), as well as the refining state (i.e. crude, semi-refined or refined), quality and packaging of the oil for which you quote prices.

Important changes in any of the following should be spot reported: import duties, internal taxes, support prices, subsidies, government purchasing programs, export taxes or subsidies, import and export quotas, dollar allocations, etc.

In those countries where oilcakes and meals are important in foreign trade or are likely to be, these commodities should receive similar reporting treatment.

#### Conversion Factors

Where data on actual production of oils from raw materials on the basis of mill returns are not available, you should attempt to calculate oil yields only when oil production data are necessary to meet reporting requirements.

In other cases, transmission of the production data for the oilseeds or fruits, and of the best available estimates for non-crushing uses (e.g. seed, feed, food, etc.) will suffice. In calculating oil yields, bear in mind that extraction rates vary from country to country (and even within countries) according to the nature of the raw material and of the extraction processes. You should therefore not indiscriminately apply U.S. conversion factors (as contained in the USDA handbook). Rather, you should attempt to obtain the most reliable local information on the subject. Beware of horse-back estimates by local officials who may not be sufficiently acquainted with the industry; in some countries, it may be worth your while to obtain data of this nature directly from well informed trade sources. In all cases where you report oil production on the basis of extraction rates, be sure to specify the coefficients used in the report.

Wherever possible, production data for oilseeds and fruits should include total production, rather than merely commercial crops. Naturally, the breakdown between the two should always be indicated when available.



Instructions for reporting on animal fats (lard, tallow, butter, etc.) will be included in the revised manuals for livestock and dairy products.

A glossary of trade terms will be found in the general market glossary attached to the general reporting manual.

References:

1. Jamieson, Vegetable Fats & Oils, Reinhold, 1943. (Should be in most Attache libraries.)
2. USDA Statistical Bulletin No. 147, Oilseeds, Fats & Oils, and their Products, 1909-53, June 1954 (Available on request from FAS.)
3. USDA Yearbook for 1954, Marketing, pages 453-460.
4. USDA Yearbook for 1950-51, Crops in Peace & War, pages 497-592.
5. U. S. Department of Commerce, Facts for Industry: Animal & Vegetable Fats & Oils, (Annual, Series M-17-1-04.)







